Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Petro Hunt, LLC
Well Name/Number: Borntrager 2C-2-1
Location: NW SW Section 2 T19N R54E
County: Dawson **, MT; Field (or Wildcat)** W/C

Air Quality

(possible concerns)
Long drilling time: 20-30 days drilling time for a vertical Red River Formation test.
Unusually deep drilling (high horsepower rig): No, large triple drilling rig for 11,270' TD vertical Red River Formation Test.
Possible H2S gas production: Yes, H2S gas production possible.
In/near Class I air quality area: No Class I air quality area in the area of review.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: No special concerns, adequate surface casing,1600' to be set and cemented back to surface with proper BOP stack should mitigate any concerns. Triple rig to drill to 11,270' TD vertical Red River Formation Test. If there are existing pipelines for natural gas in the area then associated gas must be tied into gathering system or if no gathering system nearby associated gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)
Salt/oil based mud: Use freshwater and freshwater mud system on surface hole. Oil based invert drilling fluids for the mainhole from the base of surface casing to TD.
High water table: No high water table expected.
Surface drainage leads to live water: No, nearest drainage is North ForkThirteenmile Creek, an ephemeral drainage, about 1/16 of a mile to the west from this location. There should not be any discharge of fluids off this location.
Water well contamination: No, closest water well is about 5/8 of a mile to the south southwest from this well location. All other wells are 1 mile and further from this surface location. Surface hole will be drilled with freshwater and steel surface casing set and cemented from 1600' to protect surface waters and the Fox Hill aquifer.
Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: No Class I stream drainages in the area of review.

Mitigation:
__ Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
X Closed mud system
X Off-site disposal of **solids/liquids** (in approved facility)
__ Other: _____

Comments: 1600' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used on surface hole. No pits will be utilized, using closed loop drilling system . Oil based invert drilling fluid will be recycled. Completion fluids will be hauled to a permitted commercial disposal, Indian Mounds SWD #1, Richland County, Montana. Solids will be allowed to dry will be hauled to a licensed solids disposal site, Indian Hills in North Dakota.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: No live stream crossings anticipated, will be crossing only ephemeral stream drainages.
High erosion potential: No, small cut, up to 2.1' and small fill, up to 2.3', required.
Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: Large, 420'X300' location size required.
Damage to improvements: Slight, surface use is grasslands.
Conflict with existing land use/values: Slight.

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X_ Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X_ Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
_X_ Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county, #523. Will construct, about 1/4 of a mile of new access road off the county road into this location. No pits will be utilized, using closed loop drilling system. Oil based invert drilling fluid will be recycled. Completion fluids will be hauled to a permitted commercial disposal, Indian Mounds SWD #1, Richland County, Montana. Solids will be allowed to dry will be hauled to a licensed solids disposal site, Indian Hills in North Dakota. Topsoil will be spread and seeded to vegetation per landowner specification. No special concerns

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest residences are about 5/8 of a mile to the south southwest from this location.
Possibility of H2S: Yes H2S is possible at this location.
Size of rig/length of drilling time: Triple drilling rig 20 to 30 days drilling time.

Mitigation:
_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: No concerns. Proper BOP stack and adequate surface casing should be able to control any problems that occur. (BOP's 5,000 psig annular, pipe and blind rams) rule 36.22.1014. Distance to nearest residence sufficient to mitigate any concerns for H2S.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: Species identified as threatened or endangered by USFWS are the Pallid Sturgeon, Interior Lease Tern and the Whooping Crane. Candidate species are the Greater Sage Grouse and the Sprague's Pipit. NH tracker website lists one (1) species of concern, the Preble's Shrew

Mitigation:
__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other: _____

Comments: There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites: None identified

Mitigation
__ avoidance (topographic tolerance, location exception)
__ other agency review (SHPO, DSL, federal agencies)
__ Other:_____

Comments: Private surface lands. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)
__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation
Comments: No concerns.

Remarks or Special Concerns for this site

Well is a vertical 11,270' Red River Formation Test.

Summary: Evaluation of Impacts and Cumulative effects

No long term impact expected. Some short term impacts will occur to the surface location.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki
(title:) Chief Field Inspector
Date: July 13, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Dawson County water wells
(subject discussed)
July 13, 2012
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Dawson County
(subject discussed)

July 13, 2012
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T19N R54E
(subject discussed)

July 13, 2012
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection: _____